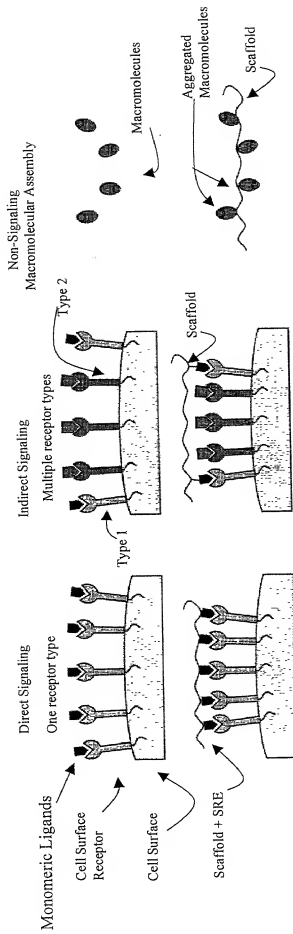


Defined Effectors of Biological Responses



Assembly of macromolecules
(1) A plurality of the same macromolecules
(2) A plurality of different macromolecules--randomly ordered or selectively ordered on scaffold

Lectin aggregation
Cell aggregation (erythrocyte or Jurkat)

Diagnostic Assays
Cancer Therapy
Pathogen Clearance

Signaling through one receptor type effected by
(1) clustering of second receptor type
(2) localization of second signal, or
(3) increased local concentration of second signal

Dual Signals (Bacterial Chemotaxis)

Vaccine Adjuvants
Immune Modulators

Signaling effected by:
(1) receptor clustering
(2) localization of additional signal, or
(3) increased local concentration

Bacterial Chemotaxis
Neutrophil Chemotaxis
Apoptosis

Vaccines
Therapeutics (Anticancer agents, Antibiotics)

FIG. 1

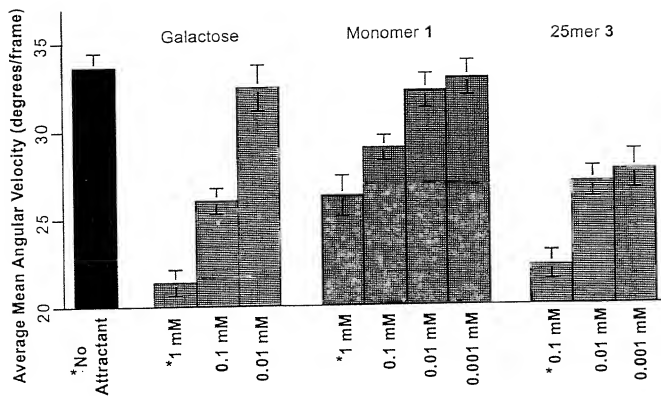


FIG. 2A



no attractant

FIG. 2B



1 mM galactose

FIG. 2C



1 mM 1

FIG. 2D



0.1 mM 3

FIG. 2E

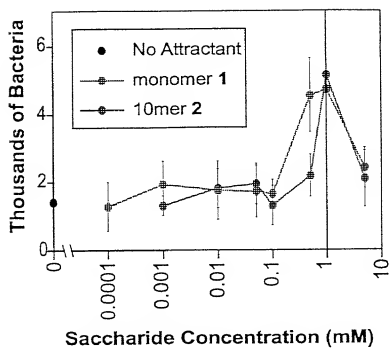


FIG. 3A

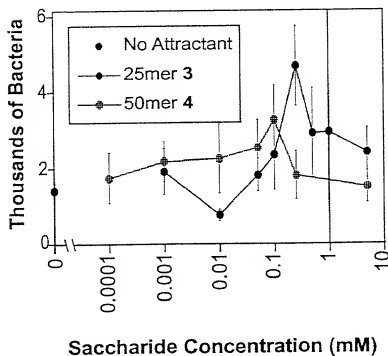


FIG. 3B

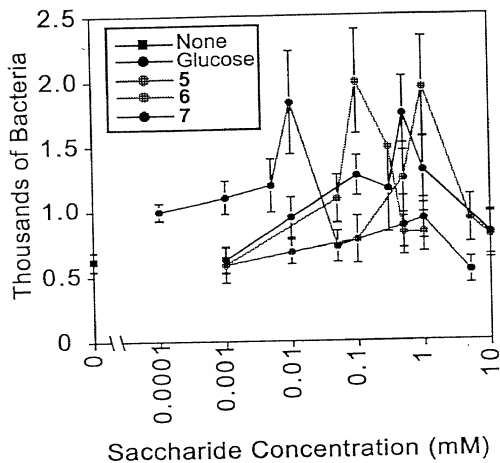


FIG. 4

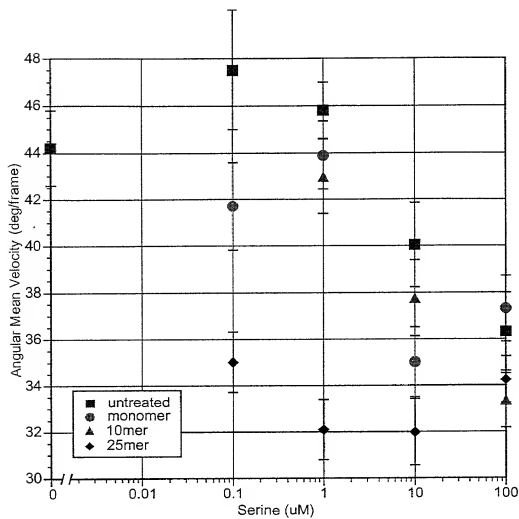


FIG. 5A

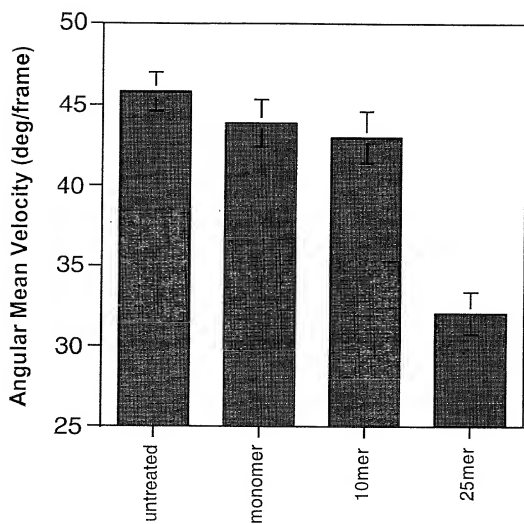


FIG. 5B

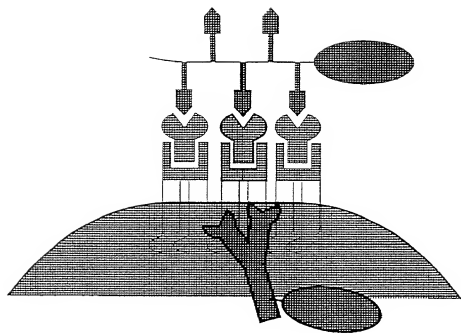


FIG. 6

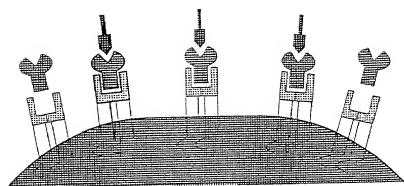


FIG. 7A

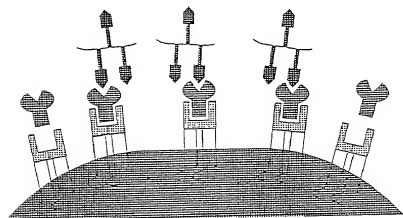


FIG. 7B

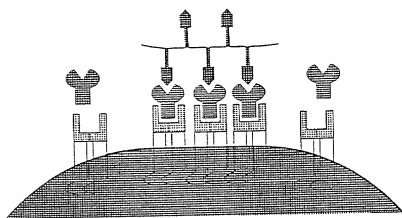


FIG. 7C

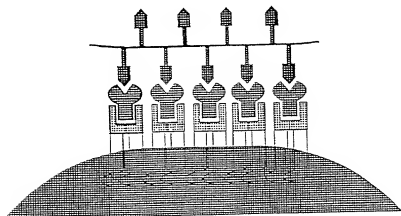


FIG. 7D

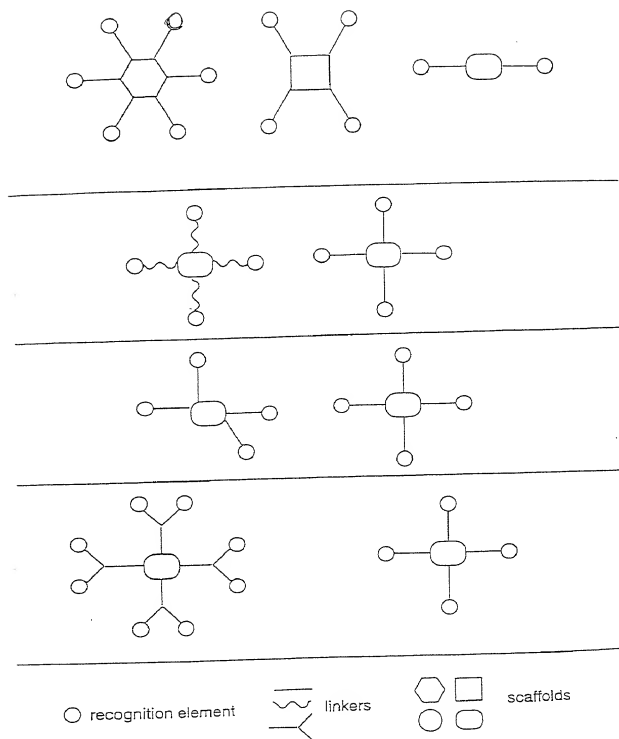


FIG. 8

FIG. 9A

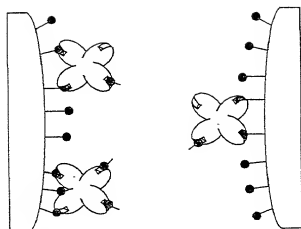


FIG. 9B

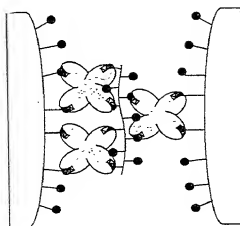
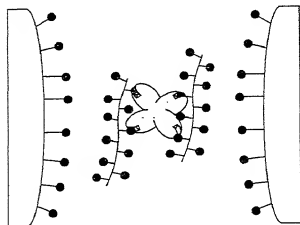


FIG. 9C



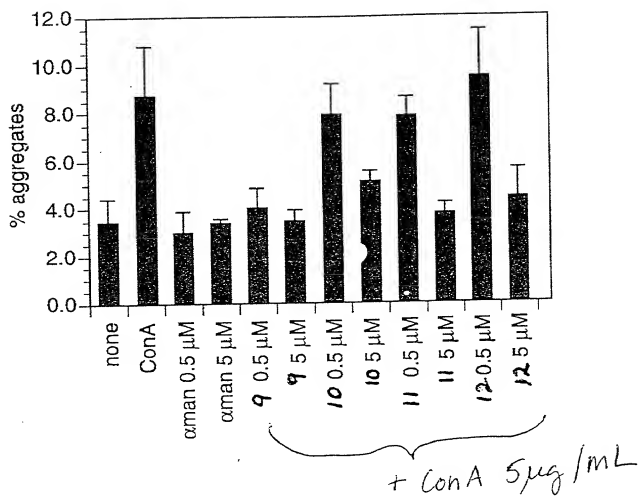


FIG. 10

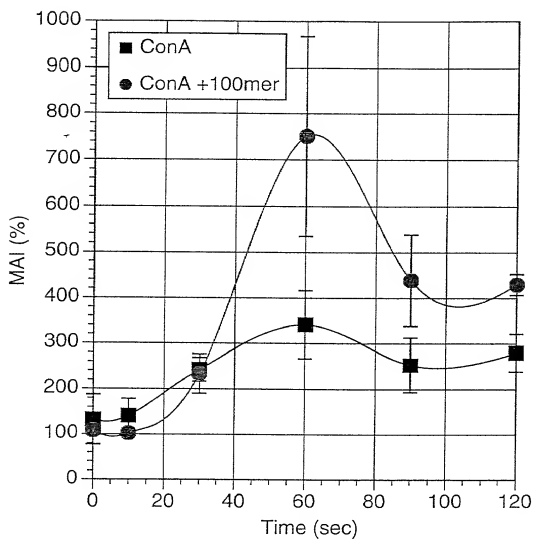


FIG. 11

Potentiation of ConA Toxicity by a Multivalent Ligand

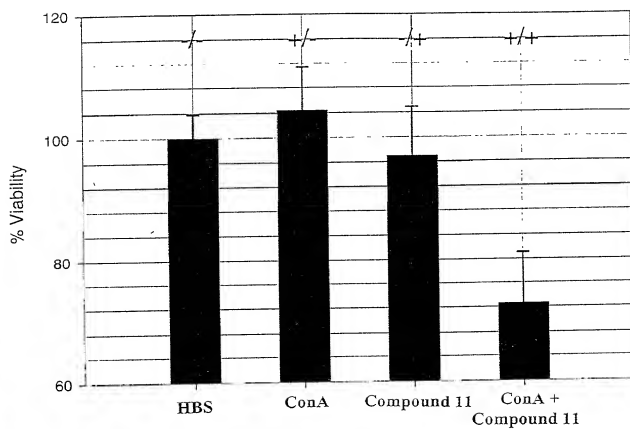


FIG. 12